

Claims:

1. A process for the production of a polyurethane product by reaction of a mixture of

5 (a) at least one organic polyisocyanate with

(b) a polyol composition comprising

(b1) from 0 to 99 percent by weight of at least one polyol compound having a nominal starter functionality of 2 to 8 and a hydroxyl number from 20 to 800, and

10 (b2) from 1 to 100 percent by weight of at least one polyol wherein the polyol has tertiary amine end-capping having autocatalytic function and no carbonate, urethane or ester groups when the tertiary amine is a dialkylamino moiety,

15 (c) optionally in the presence of one or more polyurethane catalysts, with the proviso that no tin catalyst is used when the tertiary amine of polyol (b2) is a dialkylamino group in a position Beta to a terminal hydroxyl moiety,

(d) optionally in the presence of a blowing agent; and

20 (e) optionally additives or auxiliary agents known per se for the production of polyurethane foams, elastomers and/or coatings.

25 2. The process of Claim 1 wherein (b) is a polyol blend containing 5 to 99 percent by weight of (b1) and 1 to 95 percent by weight of (b2).

3. A process for the production of a flexible polyurethane foam by reaction of a mixture of

(a) at least one organic polyisocyanate with

(b) a polyol composition having an average

30 functionality of 3 to 6 and an average hydroxyl number of 20 to 100 wherein the polyol comprises, based on the total amount of polyol component (b)

(b1) from 5 to 99 percent by weight of a polyol having a functionality of 2 to 8 and a hydroxyl number of 20 to 100 and

(b2) from 1 to 95 percent by weight of at least one polyol wherein the polyol has tertiary amine end-capping having autocatalytic function and no carbonate, urethane or ester groups when the tertiary amine is a dialkylamino moiety,

5 (c) in the presence of a blowing agent,

(d) optionally in the presence of one or more polyurethane catalysts, with the proviso that no tin catalyst is used when the tertiary amine of polyol (b2) is a dialkylamino group in a position Beta to a terminal hydroxyl moiety, and

10 (e) optionally additives or auxiliary agents known per se for the production of a flexible polyurethane foam.

4. The process of Claim 3 wherein the blowing agent is water in an amount from 0.5 to 10 parts by weight of component (b).

15 5. The process of Claim 4 wherein the blowing agent further comprises carbon dioxide added either as a gas or as a liquid.

6. The process of Claim 3 wherein a carboxylic or hydroxyl carboxylic acid is added to the reaction mixture.

20 7. The process of Claim 3 wherein polyol (b2) is a polyol having a functionality of 2 to 8 and a hydroxyl number of 20 to 100 which is end-capped by reaction with a monoalkyl amine, a dialkyl amine, a cyclic amine or a polyamine wherein the alkyl group is a C1 to C3 alkyl group and the cyclic amine 25 is a cycloaliphatic or aromatic amine containing 4 to 10 atoms in the ring.

8. The process of Claim 7 wherein the polyol (b2) is formed by reaction of the polyol with dimethylamine, isopropylamine, 3-dimethylamino)-1-propylamine, imidazole, 2-methylimidazole, 1-(3-aminopropyl)-imidazole, 1-methyl 30 piperazine or N,N-dimethyl aminopropylamine.

9. The process of Claim 8 wherein the polyol (b2) if formed by reaction of the polyol with dimethylamine, 2-methylimidazole or imidazole.

10. The process of Claim 7 wherein the polyol (b2) is formed by reaction of the polyol with an acrylate or methacrylate.

11. The process of Claim 7 wherein the polyol (b2) 5 is formed by reaction of the polyol with an aminoalkyl halide.

12. The process of Claim 7 wherein the polyol (b2) is formed by reaction of the polyol with a glycicylamine.

13. The process of Claim 7 wherein the polyol is a polyol containing a primary amine group and (b2) is formed by 10 methylating at least a portion of the primary amine groups.

14. The process of any one of claims 7 to 13 wherein the polyisocyanate is a toluene diisocyanate.

15. The process of any one of Claim 3 or 6 to 13 for the production of a foam containing an integral skin.

16. The process of any one of claims 3 to 14 wherein the polyisocyanate (a) contains at least one polyisocyanate that is a reaction product of an excess of polyisocyanate with polyol (b1), (b2) or a mixture thereof.

17. A polyol blend comprising

20 (i) from 5 to 99 percent by weight of at least one polyol compound having a nominal starter functionality of 2 to 8 and a hydroxyl number from 20 to 800, and

25 (ii) from 1 to 100 percent by weight of at least one polyol wherein the polyol has tertiary amine end-capping and contains no carbonate, urethane or ester groups when the tertiary amine is a dialkylamino moiety.